

IN THE CLAIMS

Please amend claims 1-8, 12-18, and 20-32 as indicated below.

Please add claims 33-35 as indicated below.

1. (Currently Amended) A method comprising:

extracting at least one visual feature from a document, the document having a plurality of pages;

ranking each of the pages in ~~[[a]]~~ the document based on the at least one visual feature,
wherein the ranking is performed based on a similarity relationship between content of the
respective page and the at least one visual feature; and

~~display~~ displaying page icons representing the pages of the document in an order based on
a result of the ranking.
2. (Currently Amended) The method of claim 1 wherein ~~a plurality of visual features are~~
~~used in ranking and~~ at least one visual feature is weighted based on one of gradations and a
location of the visual feature.
3. (Currently Amended) The method of claim 1 wherein the visual feature is one of a
picture, a text block, a character size, a character style, and a color, wherein each type of the
visual features is assigned with a weight value representing a weight of the respective type used
in the ranking.

4. (Currently Amended) The method of claim 1 ~~wherein a visual feature is weighted based on gradations of the visual feature~~, further comprising performing a saliency evaluation on each of the pages within the document to identify one or more pages that are significantly different from a remainder of the pages, using the at least one visual feature.

5. (Currently Amended) The method of claim 1 ~~wherein a visual feature is weighted based on location of the visual feature on a page~~, 4 wherein the visual feature is represented in a vector form, and wherein performing saliency evaluation further comprises:

determining a centroid representing an average visual feature vector of the pages;

subtracting the determined centroid from a visual feature vector of each individual of the pages to reduce common characteristics of the visual feature vectors of the pages.

6. (Currently Amended) The method of claim 1 ~~wherein the visual feature is represented in a vector form~~, 4, wherein pages having a significantly higher saliency are displayed as a full image within the respective page icon while a remainder of the pages are displayed partially.

7. (Currently Amended) The method of claim 1 wherein the visual feature is used as a distance measure between a first ~~document~~ and a second ~~document~~ consecutive pages within the document, the distance measure representing a visual difference between the first and second consecutive pages.

8. (Currently Amended) The method of claim 1, further comprising clustering of a plurality of pages ~~within a~~ of the document into one or more clusters based on visual similarities of the pages with respect to the at least one visual feature.

9. (Original) The method of claim 1 further comprising using visual features to reveal a transition from a first page to a second page of a document.

10. (Original) The method of claim 1, wherein ranking of the pages includes a correction mechanism.

11. (Original) The method of claim 1, wherein a scheme showing one of a plurality of pages in a document and a plurality of documents is by one of a linear display, a line of icons, and as a stack.

12. (Currently Amended) A computer system comprising:

- a display;
- a processor coupled to the display; and
- a memory coupled to the processor and having stored therein a routine, which when executed by the processor, causes the processor to generate display data through:
 - extracting at least one visual feature from a document, the document having a plurality of pages,
 - ranking the pages in the document according to the at least one visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and the at least one visual feature,
 - selecting a page for representing a document according to a result of the ranking a rank, and
 - displaying the selected page as the display data.

13. (Currently Amended) The computer system of claim 12 wherein ~~a plurality of visual features are used in ranking and~~ at least one visual feature is weighted based on one of gradations and a location of the visual feature.

14. (Currently Amended) The computer system of claim 13 wherein the visual feature is one of a picture, a text block, a character size, a character style, and a color, wherein each type of the visual features is assigned with a weight value representing a weight of the respective type used in the ranking.

15. (Currently Amended) The computer system of claim 13 ~~wherein a visual feature is weighted based on gradations of the visual feature.~~ further comprising performing a saliency evaluation on each of the pages within the document to identify one or more pages that are significantly different from a remainder of the pages, using the at least one visual feature.

16. (Currently Amended) The computer system of claim ~~[[13]]~~ 15 wherein the visual feature is represented in a vector form, and wherein performing saliency evaluation further comprises:
determining a centroid representing an average visual feature vector of the pages;
subtracting the determined centroid from a visual feature vector of each individual of the pages to
reduce common characteristics of the visual feature vectors of the pages.

17. (Currently Amended) The computer system of claim 13 wherein the visual feature is used as a distance measure between a first ~~document~~ and a second ~~document~~ consecutive pages within

the document, the distance measure representing a visual difference between the first and second consecutive pages.

18. (Currently Amended) The computer system of claim 12, wherein generating display data further comprises clustering of a plurality of pages ~~within a~~ of the document into one or more clusters based on visual similarities of the pages with respect to the at least one visual feature.

19. (Original) The computer system of claim 12, wherein a plurality of pages are selected and generating display data further comprises using visual features to reveal a transition from a first page to a second page of a document.

[[21]] 20. (Currently Amended) The computer system of claim 12, wherein ranking the pages includes a correction mechanism.

[[22]] 21. (Currently Amended) The computer system of claim 12, wherein a scheme showing one of a plurality of pages in a document and a plurality of documents is by one of a linear display, a line of icons, and as a stack.

[[23]] 22. (Currently Amended) An article of manufacture having at least one machine readable storage media containing executable program instructions which when executed by a digital processing system caused the digital processing system to:

extract at least one visual feature from a document, the document having a plurality of pages,

rank pages in the document based on said at least one visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and the at least one visual feature,

select the pages for representing a document based on a result of the ranking, and display selected pages.

[[24]] 23. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein ~~a plurality of visual features are used in ranking and~~ at least one visual feature is weighted based on one of gradations and a location of the visual feature.

[[25]] 24. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein the visual feature is one of a picture, a text block, a character size, a character style, and a color, wherein each type of the visual features is assigned with a weight value representing a weight of the respective type used in the ranking.

[[26]] 25. (Currently Amended) The machine readable storage media of claim [[25]] 24, ~~wherein a visual feature is weighted based on gradations of the visual feature.~~ further comprising performing a saliency evaluation on each of the pages within the document to identify one or more pages that are significantly different from a remainder of the pages, using the at least one visual feature.

[[27]] 26. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein the visual feature is represented in a vector form, and wherein performing saliency evaluation further comprises:

determining a centroid representing an average visual feature vector of the pages;
subtracting the determined centroid from a visual feature vector of each individual of the pages to
reduce common characteristics of the visual feature vectors of the pages.

[[28]] 27. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein the visual feature is used as a distance measure between a first ~~document~~ and a second ~~document~~ consecutive pages within the document, the distance measure representing a visual difference between the first and second consecutive pages.

[[29]] 28. (Currently Amended) The machine readable storage media of claim [[23]] 22, further comprising clustering of a plurality of pages ~~within a~~ of the document into one or more clusters based on visual similarities of the pages with respect to the at least one visual feature.

[[30]] 29. (Currently Amended) The machine readable storage media of claim [[23]] 22, further comprising using visual features to reveal a transition from a first page to a second page of a document.

[[31]] 30. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein ranking the pages includes a correction mechanism.

[[32]] 31. (Currently Amended) The machine readable storage media of claim [[23]] 22, wherein a scheme showing one of a plurality of pages in a document and a plurality of documents is by one of a linear display, a line of icons, and as a stack.

[[33]] 32. (Currently Amended) A method comprising:

extracting at least one visual feature from a document, the document having a plurality of pages;

grouping the pages in a of the document based on a similarity relationship between the respective page and the at least one visual feature ~~using a plurality of visual features~~;

selecting representative pages from groups that are significantly different from a remainder of the pages of the respective group; and

displaying the representative pages for representing the pages of the respective group.

33. (New) The method of claim 7, wherein the first and second consecutive pages of the document are displayed in overlap, and wherein an amount of overlapping is determined based on the distance measure represented by the visual features of the first and second consecutive pages.

34. (New) The method of claim 8, further comprising:

selecting an exemplar page from each cluster to form exemplar pages of the document, the exemplar page of each cluster having a visual feature vector closest to a center of the respective cluster; and

displaying the exemplar page of the document using one or more page icons.

35. (New) The method of claim 8, wherein a page having a most saliency among the pages of a respective cluster is displayed in full image, while a remainder of the pages in the respective cluster is displayed partially.